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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,122	11/20/2000	Teuvo Olavi Venalainen	991.1145	5980

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EXAMINER

REIS, TRAVIS M

ART UNIT PAPER NUMBER

2859

DATE MAILED: 03/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,122

Applicant(s)

VENALAINEN, TEUVO OLAVI

Examiner

Travis M Reis

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/20/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 55a'₁, 55a₁, 55a'₂, 55a₂, 565a'₁, & 56a'₂. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 16a₃, 45a₄, 55, 56, 56a₃, 56a₄, 62a₃, & 62a₄. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 7 is objected to because of the following informalities: Claim 7 recites the limitation "the balls" in line 6. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 8, 9, 11-13, & 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Venäläinen (U.S. Patent 5634368).

With reference to claims 1, 2, 9, 11, & 12, Venäläinen discloses a measurement apparatus (10) and method for use in vehicle body alignment work when a vehicle (P) to be aligned is in placed on an alignment table (11) and attached thereto by means of fastenings (13a₁₋₄), said apparatus comprising: a measurement unit structured and arranged to be movable within a vertical guide (13), wherein said vertical guide is structured and arranged to be movable within a longitudinal guide (11); said measurement unit having a movable measurement arm comprising a first arm part (17), having a first arm part longitudinal axis (L1), pivotally connected to said measurement arm via an articulation at a first end of said first arm part, and a second arm part (24) slidably insertable within said first arm part such that the second arm part can be displaced with respect to the first arm part to different length positions, having a second arm part longitudinal axis (L3), operatively connected at a second end to said first arm part, wherein said connection between said first arm part and said second arm part is such that said second arm part is rotatable (L3) about said second arm part longitudinal axis; and a measurement head (26) operatively coupled to a second end of said second arm part (Figure 4A).

With reference to claims 3 & 13, Venäläinen discloses said second arm part further comprises: a measurement through hole (22) formed at said second end thereof for receiving said measurement head therethrough; said through hole being structured and arranged such that when said measurement head is displaced therein, said

measurement head is perpendicularly aligned with respect to said second arm part longitudinal axis (Figure 4A).

With reference to claims 8 & 18, Venäläinen discloses the first arm part further comprises end threads (R) at its end, onto which threads a nut (T2) is mounted, so that by means of a tension sleeve situated between the nut and the second arm part can be locked to different positions with respect to the first arm part, the tension sleeve being split in a longitudinal direction, thereby serving as a tension washer when the nut tightens it against the arm part, the thread being a taper thread (Figure 3C).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-6 & 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venäläinen in view of Wiedmann et al. (U.S. Patent 5848477).

Venäläinen discloses all of the instant claimed invention as stated above in the rejection of claims 1-3, 8, 9, 11-13, & 18 but does not expressly disclose a plurality of annular grooves are formed on a surface of said measurement head; and an end piece fitted to said second end of said second arm part and having a measurement through hole formed therein for receiving said measurement head therein, said end piece comprising a stub projecting axially out from said second end of said second arm part having a central hole for receiving a ball and spring assembly therein for cooperating with an annular groove of said measurement head, such that said measurement head is

locked into position relative to said second arm part by a screw which presses said ball into said annular groove.

Wiedmann et al. discloses a coordinate measuring apparatus having a spatially adjustable probe pin using a ball and spring arrangement in grooves to allow the pin to be adjustable into a plurality of positions (Figure 5). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the ball, spring, and groove arrangement to the joints of the arms disclosed by Venäläinen in order that the arm may be secure when placed in a suitable position.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Venäläinen in view of Chisum (U.S. Patent 5341575).

Venäläinen discloses all of the instant claimed invention as stated above in the rejection of claims 1-3, 8, 9, 11-13, & 18 but does not expressly disclose the combination of locking positions of each arm part and the measurement head connected to the measurement arm is read and fed into the memory of a computer or said combination is detected electrically by using position detectors which indicate the pivot position of the first arm part, the rotation position of the second arm part connected to the first arm part and the linear position of the measurement head connected to the second arm part, and that, based on said data fed or directly electrically detected, the result of measurement is at least one of being directly indicated on a display of a computer or equivalent or said measurement result is printed as a measurement record.

Chisum discloses an apparatus to gather, display, and/or print vehicle chassis measurement data for accurate repair of collision damaged vehicles via a computer to store measurement and alignment data and additional means for storing position

coordinates of each of its arm parts and its measurement device for indication upon display means (col. 2 lines 20-31). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the computer disclosed by Chisum to the device disclosed by Venäläinen in order to retain the data obtained for the alignment and measurement process for analysis.

9. Claims 7 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venäläinen in view of Chartrand (U.S. Patent 5469628) & Venäläinen (U.S. Patent 5186038).

Venäläinen discloses all of the instant claimed invention as stated above in the rejection of claims 1-3, 8, 9, 11-13, & 18 but does not expressly disclose the second arm part sleeve made of plastic, at the end on the side of the first arm part.

Chartrand discloses an apparatus for measuring the deformation of damaged vehicles and for reconstructing crime scenes which uses plastic for the sleeves of the arms (col. 4 lines 55-57). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to replace the sleeve disclosed by Venäläinen with the plastic sleeve disclosed by Chartrand in order to insure that the measurement head will not be corroded by rust.

Venäläinen discloses all of the instant claimed invention as stated above in the rejection of claims 1-3, 8, 9, 11-13, & 18 but does not expressly disclose the end sleeve is attached by means of a cotter to a metal portion of the second arm part, enabling good bearing properties.

Venäläinen (U.S. Patent 5186038) discloses a rectifying means for a car body and procedure in rectifying it which utilized a cotter pin (28) in the securing of beams of

the frame (col. 3 lines 45-48). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the cotter pin disclosed by Venäläinen (U.S. Patent 5186038) to the device disclosed by Venäläinen in order that the sleeves will be fastened together securely.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ham discloses a vehicle repair measuring device (U.S. Patent 5343628). LeGrande et al. discloses a universal alignment measuring system (U.S. Patent 5014442). Giacomini discloses a method and apparatus for measuring deviations in vehicle bodies or frames (U.S. Patent 4523384). Mason discloses a vehicle alignment gauging apparatus (U.S. Patent 5507101). Sonner discloses a frame gauge for motor vehicle chassis (DE 3546326A1). Mori discloses a shape measuring apparatus for automobile frame (JP 05005602).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis M Reis whose telephone number is (703) 305-4771. The examiner can normally be reached on 8:00--5:00 Monday--Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



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